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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,496	07/27/2006	Akio Taniguchi	5404/166	8335
23373 7590 10/20/2009 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER				
MULLS, JEFFREY C				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
10/20/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/587,496

**Applicant(s)**

TANIGUCHI ET AL.

**Examiner**

Jeffrey C. Mullis

**Art Unit**

1796

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 4, 5, 7, 8, 10-14, 16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 5, 7, 8, 10-14, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 5, 7, 8, 10-14, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tsuji et al. (WO 02081561).

The above WO document corresponds to US 2004/0106732 which will be referred to since it is in English.

The reference discloses a composition containing block copolymers with at least one acrylic and one methacrylic block (abstract). Note Paragraph 219 for an example of a glycidyl containing block copolymer which is molded at temperatures of 190 degrees centigrade, i.e. greater than the 150 degree centigrade step during which vulcanization is explicitly disclosed and therefore it reasonably appears that at least some vulcanization takes place during molding. Fillers and lubricants may be added in claim 37.

. When the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, basis exists for shifting the burden of proof to applicant. Note In re Fitzgerald et al. 619 F. 2d 67, 70, 205 USPQ 594, 596, (CCPA 1980). See MPEP § 2112-2112.02.

Claims 1, 4, 5, 7, 8, 10-14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneda, cited by applicants (JP 200260449) optionally in view of Shimada et al. (US 6,090,468).

Note that the Patent Abstracts of Japan Abstract discloses that the patent discloses compositions containing block copolymers with acrylic and methacrylic blocks with curable reactive groups. Note that the compositions are molded (see for example paragraph 164 for an Example of molding) and that the compositions may undergo hardening and shaping simultaneously at paragraph 10. Note that the block copolymers may containing an epoxy group and a curing agent therefor at paragraph 107 which includes agents set out at paragraphs 107-113 including novolacs.

Shimada at column 12, lines 56-64 discloses novolac curing agents of molecular weight of 1,000 for high molecular weight glycidyl methacrylate containing macromolecular materials.

While the molecular weights of the polymeric curing agents of the primary reference are not explicitly disclosed, most of the curing agents discloses have molecular weights far below 50,000 (as do most crosslinker in the art) and those of ordinary skill would therefore assume that patentees novolac curing agents were also intended to have molecular weights of below 50,000 and use of such would have been obvious to a practitioner having an ordinary skill in the art at the time of the invention to use curing agents such as novolacs in a form of less than 50,000 molecular weight in the expectation of adequate results absent any showing of surprising or unexpected results.

Arguably the examiner is incorrect and use of polymeric curing agents in the composition of the primary reference is not taught or suggested by the primary reference alone. However, use

of the trade named novolacs of the secondary reference in the primary reference would have been obvious to a practitioner having an ordinary skill in the art at the time of the invention, motivated by the need for a crosslinking material for use in the primary reference and by the disclosure of the secondary reference of a specific material for crosslinking glycidyl methacrylate containing macromolecular materials and further motivated by the convenience of being able to use a commercially available one absent any showing of surprising or unexpected results.

Applicant's arguments filed 8-20-09 have been fully considered but they are not persuasive.

The rejection based on Tsuji '732 has been clarified above and as set out above, note paragraph 219 for an example of a glycidyl containing block copolymer which is molded at temperatures of 190 degrees centigrade, i.e. greater than the 150 degree centigrade step during which vulcanization is explicitly disclosed and therefore it reasonably appears that at least some vulcanization takes place during molding. Crosslinkers are generally very low molecular weight materials and there is nothing in Tsuji indication that the brominated phenol formaldehyde resin in the example of paragraph 219 has a molecular weight of over 50,000.

The rejection under 35 USC 102 based on JP '449 has been withdrawn. Patentees crosslinker are mostly monomeric and of much lower molecular weight than 50,000 and curing agents generally are not of greater than 50,000 molecular weight and therefore those skilled in the art would conclude that the curing agents such as novolacs of JP '449 also had molecular weights below 50,000 but in any case there is ample motivation to use curing agents with molecular weight below 50,000 in the process of JP '449 as set out above.

Any inquiry concerning this communication should be directed to Jeffrey C. Mullis M-F,  
9-5pm at telephone number 571 272 1075.

Jeffrey C. Mullis  
Primary Examiner  
Art Unit 1796

JCM

10-19-09

/Jeffrey C. Mullis/

Primary Examiner, Art Unit 1796